Distribution

Unit Managers' Meeting: 100 Areas Remedial Action Unit/Source Operable Units

Mary Jarvis ..... DOE-RL, RP (A5-14)
Owen Robertson ..... DOE-RL, RP (A3-04)
Chris Smith ..... DOE-RL, RP (A3-04)
Mike Thompson ..... DOE-RL, RP (A6-38)
Arlene Tortoso ..... DOE-RL, RP (A6-38)
Jon Yerxa ..... DOE-RL, RP (A5-15)

Lisa Treichel ..... DOE-HQ (EM-442)

John Price ..... WDOE (Kennewick) (B5-18)
Jean Vanni ..... WDOE (Kennewick) (B5-18)
Wayne Soper ..... WDOE (Kennewick) (B5-18)

Dennis Faulk ..... EPA (B5-01)

Randy Acselrod ..... Washington Dept. of Health
Debora McBaugh ..... Washington Dept. of Health
Richard Jaquish ..... Washington Dept. of Health

Eileen Murphy-Fitch ..... FD (A1-14)

John April ..... BHI (L6-06)
Jane Borghese ..... FH (E6-35)
Rich Carlson ..... BHI (H0-17)
Frank Corpuz ..... BHI (H0-17)
Michelle Coy ..... CHI (H9-02)
Rick Donahoe ..... BHI (X5-60)
Jack Donnelly ..... BHI (H0-17)
Jon Fancher ..... CHI (X5-60)
Ella Feist ..... CHI (H9-01)
Tom Kisenwether ..... BHI (X3-16)
Kim Koegler ..... BHI (H0-23)
Rex Miller ..... BHI (X3-40)
Robert Nielson ..... BHI (X9-08)
Walter Remsen ..... BHI (H0-17)
Annie Smet ..... BHI (H0-17)
Dean Strom ..... CHI (X3-40)
Jill Thomson ..... CHI (H9-01)
Michael Wetzler ..... BHI (H0-17)
Joan Woolard ..... BHI (H0-02)
Administrative Record ..... BHI (H0-09) 2 copies

Please inform Michael Wetzler (372-9562) – BHI (H0-17) of deletions or additions to the distribution list.

108421

Meeting Minutes Transmittal/Approval
Unit Managers' Meeting
100 Area Remedial Action and Waste Disposal Unit/Source Operable Unit
3350 George Washington Way, Richland, Washington
May 22, 2003

APPROVAL: _____ Date 6/26/03
Chris Smith/Jamie Zeisloft, 100 Area Unit Managers, RL (A3-04)

APPROVAL: _____ Date 6/26/03
Michael Thompson/ Arlene Tortoso, Waste Management Division, RL (A6-38)

APPROVAL: _____ Date 6/26/03
John Price, 100 Aggregated Area Unit Manager, Ecology (B5-18)

APPROVAL: _____ Date 6-26-03
Dennis Faulk, 100 Aggregate Area Unit Manager, EPA (B5-01)

Meeting minutes are attached. Minutes are comprised of the following:

Attachment 1	--	Attendance Sheet
Attachment 2	--	Agenda
Attachment 3	--	100 Area Meeting Minutes
Attachment 4	--	Groundwater Operations Activities Summary Sheet
Attachment 5	--	Aquifer Sampling Tubes Report
Attachment 6	--	Petroleum Hydrocarbon Results from Well 199-N-18
Attachment 7	--	WIDS site CVP Closeout Summary Table
Attachment 8	--	*Deferring 105-D Fuel Storage Basin Side Slope Soils to Remedial Action and Waste Disposal Program* White Paper

Prepared by: _____ Date 6/25/03
Mike Wetzler (H0-17)

Concurrence by: _____ Date 6/25/03
Vern Dronen, Project Manager
BHI Remedial Action and Waste Disposal Project (H0-17)

Attachment 1

Remedial Action and Waste Disposal Unit Managers' Meeting
Official Attendance Record – 100 Area
May 22, 2003

108421

Please print clearly and use black ink

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
Chris Smith	DOE/AMRC	100 Area Unit Manager	372-1544
Richard Carlson	BHI	100/300 Design & Assessment	372-9632
Dennis Faulk	EPA		
Jamie Zeisloft	RL/ERD	UM	372-0188
Larry Gadbois	EPA		376-9884
Jack Donnelly	BHI	P. env. lead	372-9565
Dib Goswami	Ecology		509-736-3015
Mark Buckmaster	BHI	Eng	521-2089
T Rosenwether	BHI	GA RAWDTR	531-0673
Roger Landon	BHI		372-9209
Steve Clark	CHI	CVP	372-9531
Mike Schwab	BHI	CVP	372-9407
Bob Peterson	PNNL	100-KR-4	373-9020
Mary Hartman	PNNL	100 N	373-0028
John Fruchter	PNNL	GWMP	376-3937
Frank Corpuz	BHI	Project Engineer	531-0625
John Price	Ecology	Proj. Mgr	736-3029

Attachment 1

Remedial Action and Waste Disposal Unit Managers' Meeting
Official Attendance Record – 100 Area
May 22, 2003

108421

Please print clearly and use black ink

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
Jane V Borghese	FH	GW	373 3804
Vern Johnson	FSC	GW	528-7398
Bob Raidl	FH/Geosc.	GW	373-3904
Beth Rochette	Ecology	ES	736-3020
Pam DOCTOR	BHI	RISK	376-9107
Rex Miller	BHI	100 B/C	373-5876
D. N. Strom	CHI	100 BC	3-5519
Jon Fancher	CHI	100 N	3-9123

100 AREA
UNIT MANAGERS MEETING AGENDA

3350 George Washington Way
May 22, 2003

1:00 – 4:00 p.m. 3350 GWW (Room 1B45)

Administrative

- Meeting minutes status
- Review and approve last UMM minutes
- Next 100 UMM is June 26, 2003, at 1:00 – 4:00, 3350 GWW (1B45)

Groundwater

- 100 Area Open Action Items
- 100-Area Open forum and discussion
- 100-BC-5 and 100-FR-3 DQO status

100-BC-5 Groundwater OU

-

100-FR-3 Groundwater OU

-

100-HR-3 Groundwater OU

- Remediation treatment status

100-KR-4 Groundwater OU

- Remediation treatment status
- 100 K Burial Ground Soil Gas Investigation

100-NR-2 Groundwater OU

- Remediation treatment status
- Petroleum hydrocarbon results from well 199-N-18

Review Open Action Items Log

General Crossover Items

- CVP status

D&D

- Submittal of approved *Deferring 105-D Fuel Storage Basin Side Slope Soils to Remedial Action and Waste Disposal Program* white paper

Remedial Action

100 Area Common

- 100 Area RDR/RAWP and SAP Status
- Remaining Sites ESD Status
- 100 Area Remaining Sites Confirmatory SAP Status
- Remaining Sites Sampling Efforts Status
- 118-K-1 Design
- 100 F Burial Ground Design

100 F, K, and Group 4

- 100 F General Status
- 100 K General Status
- 126-F-1 Ash Pit Path Forward

100 N

- Project Status
- Air Monitoring Plan
- Partial backfill needed at 116-N-1 Trench

100 B/C

- Project Status

105F Fuel Storage Basin

- RAWD and D&D Interface at 105F Fuel Storage Basin
- Backfilling at 105 F Fuel Storage Basin by RAWD and D&D to support SSE subcontractor mobilization

Other

UNIT MANAGERS MEETING MINUTES

3350 George Washington Way, 1B45
May 22, 2003

1:00 – 3:00 p.m. 100 Area 3350 GWW, 1B45

Administrative

- Meeting Minute Status – April's meeting minutes were approved and signed by those in attendance.
- The next 100 Area Unit Managers Meeting will be held on June 26, 2003, at 3350 GWW room 1B45 starting at 1:00 p.m.

Groundwater

- 100 Area Open Action Items – There are two action items from last months meeting that are still open.
- 100 Area Open Forum and Discussion – There were not items to discuss.
- 100-BC-5 and 100-FR-3 DQO Status – The DQO summary report is out for review. There will also be drafts going out with the sampling schedule attached.

100-BC-5 Groundwater OU

- Was not discussed.

100-FR-3 Groundwater OU

- Was not discussed.

100-HR-3 Groundwater OU

- Remediation Treatment Status – 100-HR-3 is operating at approximately 15 gallons per minute. There was some routine scheduled maintenance done last month. Extraction Well 199-H4-65 is in service.

100-KR-4 Groundwater OU

- Remediation Treatment Status – Vern Johnson (FH) was introduced as the new groundwater contact. Vern handed out and reviewed the groundwater operations activities for the period of April 21 through May 18 (**Attachment 4**). Bob Raidl (FH) handed out and reviewed the Aquifer Sampling Tubes report (**Attachment 5**). Bob briefly went over the documentation that was included in the packet.

- 100 K Burial Ground Soil Gas Investigation – The group is close to being in the field and could be there as early as June.

100-NR-2 Groundwater OU

- Remediation Treatment Status – Things are running well at 100-NR-2. The upgrades that were planned are on schedule.

- Petroleum Hydrocarbon Results from Well 199-N-18 document was handed out (**Attachment 6**) and briefly discussed.

Review Open Action Items Log

- The open action item log was not available for this meeting.

General Cross Over Items

- CVP Status – Rich Carlson (BHI) handed out the WIDS Site CVP Closeout Summary Table (**Attachment 7**).

D&D

- Submittal of approved *Deferring 105-D Fuel Storage Basin Side Slope Soils to Remedial Action and Waste Disposal Program* white paper (**Attachment 8**) was handed out.

100 Area Common

- Air Monitoring Plan – Jamie Zeisloft (DOE) stated that he met with DOE's RCA ground to discuss their disapproval of the 118-K-1 Air Monitoring Plan. RCA wants the document submitted as a secondary document or primary document depending on whether approval is necessary. Dennis Faulk (EPA) stressed their position is to approve air monitoring plans. Jamie Zeisloft (DOE) further expressed that discussions were still in progress to evaluate whether Air Monitoring Plans should be stand alone documents or appended to the Remedial Design/Remedial Action Workplans. Dennis Faulk (EPA) stated a meeting with EPA and DOE was expected in the next week to discuss CERCLA documents and approvals, but it was determined that the Air Monitoring Plan could be submitted as a primary document, but the whole document would have to be revised. There is going to be a meeting set up next week to discuss this issue.

- APQ (Annual Possession Quantity) – Jamie Zeisloft (DOE) asked if there was another way to categorize the information in the APQ (calculation vs. data).

- RDR/RAWP and SAP Status – The Ecology letter regarding the RDR/RAWP is out. John Price (Ecology) stated that he will review the letter with Ella Feist (ERC)

- Remaining Sites ESD Status – The document will go out for internal review soon. Once DOE gets it to review it will have to go through the full review.

- 100 Area Remaining Sites Confirmatory SAP Status – All comments have been received from both regulatory agencies and the comments have been incorporated. DOE has elected to go with US EPA's recommendation to hold up finalizing the CSAP. The conceptual site models are of limited use because all of the sampling designs are site-specific, and are approved on an individual basis. Therefore, the site-specific designs can be submitted under the auspices of the previously approved SAP, and there's no need to finalize the CSAP.

- Remaining Sites Sampling Efforts Status – The remaining sites sampling should be finished with in the next few days. Three of the sites have failed so far, the rest are expect to pass.

- 118-K-1 Design Status – The design will start the internal review process soon.

- 100 F Burial Grounds Design – The design will state the internal review process soon.

100 F, K and Group 4

- 100 F General Status – The backfill at 100 F will be completed by the end of this week. There will be some minor cleanup that needs to be done. revegetation will start this fall.

- 100 K General Status – Currently they are working in the retention basin and that work should be complete by the end of June. Once the retention basin is complete they will begin remediation work on the K1 Crib and pipelines.

- 126-F-1 Ash Pit Path Forward – Jack Donnelly (ERC) stated that he sent information to DOE regarding holding back on the CVP until 2007. Dennis Faulk (EPA) agreed that no further remedial is needed in this site.

100 N

- Project Status – Jon Fancher (ERC) provided an update on the project nothing the project has excavated 103,476 tons this FY, and excavating a total of 345,419 tons since beginning of the project (this includes 116-N-3 & 116-N-1). The project should finish digging in early June. After that the subcontractor will decon equipment and then demobilize from the site. Currently BHI has a procurement out for redesign, which should be awarded soon. John Price (Ecology) noted that Ecology would like to be involved in the redesign, and requested a briefing. Jon Fancher (ERC) noted the project would need to backfill a portion of the 116-N-1 Trench. This is because excavating plumes in the east and the crib in the west will remove access to the river

side of trench/crib, and a backfill for an access road over the trench is needed. This will keep dose to non-project workers ALARA and eliminate traffic issues.

- Air Monitoring – 100 N has calculated a revised estimate of the TEDE (dose) from 116-N-1 in CY 2003. This new estimate (8.18 mr/yr) is slightly higher then the previous estimate (6.87 mr/yr). These figures had already been communicated to Ecology and Health. John Price (Ecology) is aware of this and did not need any additional information, and was not concerned and felt at this time no further action was needed. The current plan is to revise the AMP. The Air Monitoring Plan is part of the RD/RA work plan and the work plan would need to be revised each time an air monitoring plan is revved.

100 B/C

- Project Status – Currently they are chasing plumes near the B Reactor and they are continuing removal of over-burden near C Reactor

- There will be 5 CVP's going out now and another 2 are scheduled to go out soon. Dean Strom (ERC) stated that he would like to combine the over-burden material of the 6 accelerated sites into one sample design and one CVP. Dennis Faulk (EPA) stated that he would like to see the data first, if the levels are low then he will not have a problem with doing that.

Outstanding 100 Area Unit Manager's Meeting Action Items

April 2003 Actions

- **Arlene Tortoso (RL) to look into the possibility for a replacement well.**
- **Arlene Tortoso (RL) to provide a plan for installing a new shoreline aquifer tubes in the 100 Area**

Attachment 4

100 Area UMM – May 2003

Groundwater operations activities for the period of April 21 through May 18 are summarized as follows.

ISRM

- Dithionite injections were completed in April. Extractions continued during the report period and were 50% complete on 5/20/03.
- The water level in the solar evaporation ponds is high because of lower than expected evaporation rates due to:
  - ✓ unseasonably cool weather conditions
  - ✓ windy conditions that reduce spray system operating time
- The monthly hexavalent chromium results for wells near the dichromate transfer station (199-D4-15, -D5-38, -D5-39, -D5-43) are comparable to the previous month (see attached figure). The highest concentration was 5100 ug/L for well 199-D5-39. The time versus concentration pattern suggests this well is very near the source (i.e. sharply changing concentrations). Well 199-D5-38, located 200 m in the downgradient direction from –D5-39, exhibits a similar pattern, suggesting a common source.

100-HR-3

- The system operated at a flow rate of 255 to 260 gpm
- Run times were: 99% for the reporting period, 98.6% for FY 2003 and 92% since system inception
- Resin was replaced in vessel A1 on 4/29/03
- Unscheduled outage for 1.5 hrs on 5/1/03 for sluice pump work
- Extraction well H4-65 was placed back in service during the period
- Booster pump motor replacement was completed

100-KR-4

- The system operated at a flow rate of 265 to 274 gpm during the report period.
- Run times were: 100% for the report period, 99.6% for the year to date and 94.7% since system inception.

- Design for upgrading transfer pumps is over 90% complete and H and N pump motor repairs are 50% complete.

- The hexavalent chromium concentration was 50 ug/L in well K-130 on 3/26/03.

- Extraction well K-126 was shutdown from 3/25/03 to 3/28/03 due to low water levels. The average flow rate for the report period was 13.5 gpm and ranged from 13 to 15 gpm.

- New resins were installed in vessels B2 and C2 on 4/29/03.

- Installation of new aquifer tubes to supplement well coverage is planned for early FY04. Approximately 15 tubes total are budgeted for KR-4 and HR-3. Preliminary site locations were considered during the report period. However, selection of final locations will require consideration of both cultural and physical constraints and interaction with other interested parties.

- Well K-33 (located to the north of the KW fuel storage basin) will be replaced.

100-NR-2

- The system operated at a flow rate of 65 gpm for the report period

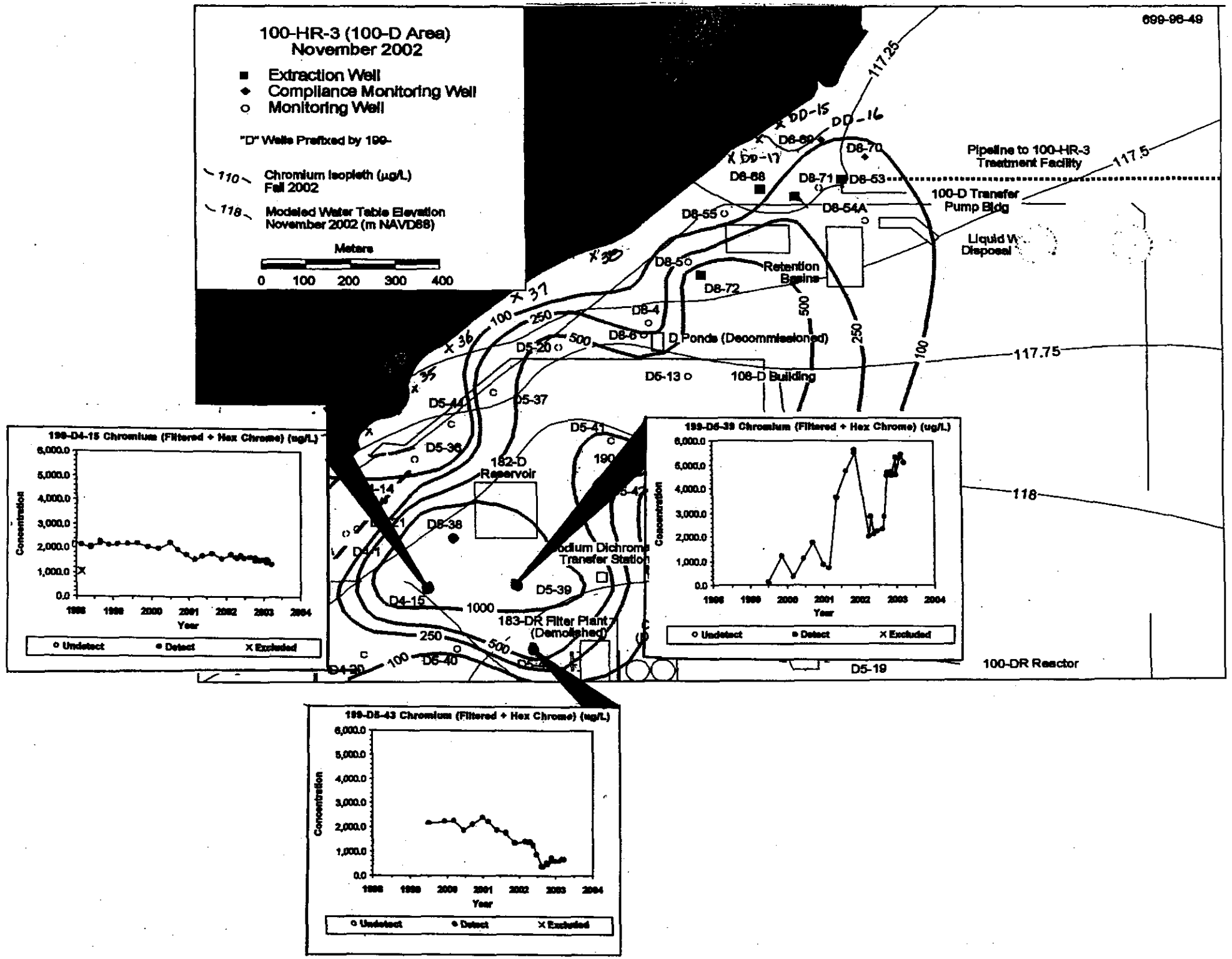
- Run times were: 96.2 % for the report period, 96.8% for FY03 and 94.0% since system inception.

- Process pump upgrades are on schedule

- Parts for a leaking valve in the treatment train piping (currently bypassed) arrived and are ready for installation (pending craft scheduling).

- Clinoptiolite shipment has arrived ahead of schedule.

- A draft report summarizing existing information on riparian and aquatic species in the vicinity of N springs was prepared by PNNL. This information will be used as background for an "interested parties" workshop on groundwater remediation at 100 N to be held in early August 03. This initial effort is intended to provide an opportunity for dialogue among interested parties regarding remediation alternatives.


100-HR-3 (100-D Area)
November 2002
Extraction Well
Compliance Monitoring Well
Monitoring Well
"D" Wells Prefixed by 199-
110 Chromium Isopleth (µg/L) Fall 2002
118 Modeled Water Table Elevation November 2002 (m NAVD88)
Meters
0 100 200 300 400
699-96-49
117.25
117.5
117.75
118
DD-15
DD-16
DD-17
D8-69
D8-70
D8-68
D8-71
D8-53
D8-54A
D8-55
D8-56
D8-72
D8-4
D8-5
D5-20
D5-13
D5-44
D5-37
D5-36
D5-41
D5-42
182-D Reservoir
D8-38
D4-15
D5-39
D4-20
D5-40
D5-19
Pipeline to 100-HR-3 Treatment Facility
100-D Transfer Pump Bldg
Liquid W Disposal
Retention Basins
D Ponds (Decommissioned)
108-D Building
Transfer Station
183-DR Filter Plant (Demolished)
100-DR Reactor
1000
500
250
100
199-D4-15 Chromium (Filtered + Hex Chrome) (ug/L)
199-D8-39 Chromium (Filtered + Hex Chrome) (ug/L)
199-D8-43 Chromium (Filtered + Hex Chrome) (ug/L)
Concentration
Year
Undetect
Detect
Excluded

Aquifer Sampling Tubes: November 2002 to January 2003

AQST_NAME _CURRENT	WELL_ID	PORT_ DEPTH (Feet-bgs)	SEGMENT	HRMZk	On 10/8/02 list	On 10/24/02 list	Fall 2002 Sample Date	Fall 2002 Spec Conduct (uS/cm)	Fall 2002 Sample No.	Lab	Qual	Fall 2002 Hex Chromium (ug/L)	Fall 2002 Sulfate (mg/L)	Severn Trent Analyses	Fall 2002 Comment
01-S	B8115	7.0	VERN	2.600		x			Not sampled						Assigned lowest priority
01-M	B8114	16.0	VERN	2.600		x			Not sampled						Assigned lowest priority
01-D	B8113	24.0	VERN	2.600		x			Not sampled						Assigned lowest priority
02-S	B8118	6.0	VERN	3.130		x			Not sampled						Assigned lowest priority
02-M	B8117	14.9	VERN	3.130		x			Not sampled						Assigned lowest priority
03-M	B8120	7.0	BC5	3.450											
03-D	B8119	13.0	BC5	3.450											
04-S	B8124	8.3	BC5	3.730		x	12/16/2002	337	B15YY8	SV		7			
04-M	B8123	13.0	BC5	3.730		x	12/16/2002	337	B15YY6	SV		11			
04-D	B8122	25.0	BC5	3.730		x	12/16/2002	336	B15YY4	SV		8			
04-D	B8122	25.0	BC5	3.730		x	12/16/2002	336	B15YY5	STR				Sr-90; H3	
05-S	B8127	8.5	BC5	3.890		x	12/16/2002	205	B16004	SV		4			
05-M	B8126	17.0	BC5	3.890		x	12/16/2002	345	B16000	SV		38			
05-M	B8126	17.0	BC5	3.890		x	12/16/2002	345	B16001	STR				Sr-90; H3	
05-D	B8125	25.5	BC5	3.890		x	12/16/2002	313	B16002	SV		27			
06-S	B8130	8.8	BC5	4.120		x	12/16/2002	239	B16012	SV					Sample opaque-could not analyze; nonsettleable
06-M	B8129	15.5	BC5	4.120	x	x	12/16/2002	351	B16006	SV		37			
06-M	B8129	15.5	BC5	4.120		x	12/16/2002	351	B16007	STR				Sr-90; H3	
06-D	B8128	23.0	BC5	4.120		x	12/16/2002	397	B16008	SV		36			
07-M	B8132	8.0	BC5	4.270		x	12/16/2002		No yield						No yield
07-D	B8131	20.0	BC5	4.270		x	12/16/2002	284	B16014	SV		9			
07-D	B8131	20.0	BC5	4.270		x	12/16/2002	284	B16015	STR				Sr-90; H3	
11-D	B8143	10.5	BC5	5.070	x	x			Not sampled						Assigned lowest priority
12-D	B8146	10.0	BC5	5.330	x	x			Not sampled						Assigned lowest priority
13-S	B8151	8.3	BC5	5.610	x	x			Not sampled						Assigned lowest priority
13-D	B8149	22.9	BC5	5.610		x			Not sampled						Assigned lowest priority
14-S	B8154	7.5	BC5	5.880	x	x	11/20/2002		Not sampled						Lower spec conduct
14-M	B8153	14.5	BC5	5.880		x	11/20/2002		Not sampled						Lower spec conduct
14-D	B8152	21.5	BC5	5.880		x	11/20/2002	371	B16026	SV		3			Substitute for 15-M
14-D	B8152	21.5	BC5	5.880		x	11/20/2002	371	B15YV1	STR				Tc-99; Sr-90; GA/GB; H3	Substitute for 15-M
14-D	B8152	21.5	BC5	5.880		x	11/20/2002	371	B15YT9	STS				Anions	Substitute for 15-M
14-D	B8152	21.5	BC5	5.880		x	11/20/2002	371	B15YV0	STS				Metals	Substitute for 15-M
15-M	B8156	13.7	KR4	6.090	x	x	9/24/2002		Not sampled						Can't locate 9/24/02 (looked wrong area); go farther downstream
17-M	B8162	11.0	KR4	6.470	x	x	11/20/2002	302	B16032	SV		2			
17-M	B8162	11.0	KR4	6.470	x	x	11/20/2002	302	B15YV5	STR				C-14; GA/GB; H3	
17-M	B8162	11.0	KR4	6.470	x	x	11/20/2002	302	B15YV4	STS				Anions	
17-D	B8161	19.5	KR4	6.470		x	11/20/2002	339	B16030	SV		2			
18-S	B8204	8.5	KR4	6.710	x	x	9/24/2002		Not sampled						Did not collect for Sr-90 analysis
19-M	B8206	10.0	KR4	6.850	x	x	11/19/2002		None						Can't locate 9/24/02 (looked wrong area); it's between pump houses
19-D	B8205	22.0	KR4	6.850		x	11/19/2002	226	B16036	ML	<	5			Lower spec conduct
19-D	B8205	22.0	KR4	6.850		x	11/19/2002	226	B15YV9	STR				Tc-99; H3	
19-D	B8205	22.0	KR4	6.850		x	11/19/2002	226	B16037	STR				Sr-90; C-14; H3	
21-S	B8213	11	KR4	7.420	x	x	11/19/2002	126	B160L1	SV		2			
21-M	B8212	15	KR4	7.420		x	11/19/2002	172	B16040	ML	<	5			
22-M	B8215	7.5	KR4	7.730	x	x	11/19/2002	142	B16043	SV		8			
22-D	B8214	12.3	KR4	7.730		x	11/19/2002	244	B16042	ML		52			
23-M	B8218	7.0	KR4	7.900		x	9/24/2002		Not sampled						Could not locate
23-D	B8217	12.0	KR4	7.900	x	x	9/24/2002		Not sampled						Could not locate
DK-04-2	B8526	11.5	KR4	8.140		x	11/19/2002	244	B160K0	SV		30			Temporary protection installed
DK-04-2	B8526	11.5	KR4	8.140		x	11/19/2002	244	B161P9	STR				H3	
DK-04-3	B8527	15	KR4	8.140	x	x	11/19/2002	241	B160K1	ML		24			Temporary protection installed
25-D	B8223	7.5	KR4	8.260	x	x	11/19/2002	121	B16046	ML	<	5			Regrouped with KR4
26-S	B8228	6.0	KR4	8.390		x	11/20/2002	112	B16049	SV		1			Regrouped with KR4
26-M	B8227	14.0	KR4	8.390	x	x	11/20/2002	144	B16048	SV		1			Regrouped with KR4
26-D	B8226	23.0	KR4	8.390		x	11/20/2002	340	B16047	SV		17			Regrouped with KR4
26-D	B8226	23.0	KR4	8.390		x	11/20/2002	340	B15YW2	STR				H3	

Attachment 5

Aquifer Sampling Tubes: November 2002 to January 2003

AQST_NAME _CURRENT	WELL_ID	PORT_ DEPTH (feet-bgs)	SEGMENT	HRMZk	On 10/9/02 list	On 10/24/02 list	Fall 2002 Sample Date	Fall 2002 Spec Conduct (uS/cm)	Fall 2002 Sample No.	Lab	Qual	Fall 2002 Hex Chromium (ug/L)	Fall 2002 Sulfate (mg/L)	Severn Trent Analyses	Fall 2002 Comment
DD-50-1	B8515	15	NR2	9.800		x	12/18/2002	192	B160J7	SV		14			
DD-50-2	B8516	20	NR2	9.800		x	12/18/2002	245	B160J8	SV		24			
DD-50-3	B8517	24.7	NR2	9.800	x	x	12/18/2002	244	B160J9	ML		28	30		
DD-50-3	B8517	24.7	NR2	9.800	x	x	12/18/2002	244	B16005	STR				H3	
DD-50-4	B8518	31	NR2	9.800		x	12/18/2002		Not sampled						Try again to sample; tube closer to river than others
DD-49-1	B8511	12	NR2	9.830		x	12/18/2002	184	B160J4	SV		11			Dupl result is 9.971; confusion over 12 or 16 ft (both installed)
DD-49-2	B8512	21.6	NR2	9.830		x	12/18/2002		Not sampled						Confusion over 12 or 16 ft tube
DD-49-3	B8513	25	NR2	9.830		x	12/18/2002	252	B160J2	SV		20			
DD-49-4	B8514	31	NR2	9.830		x	12/18/2002	263	B160J3	SV		17			
DD-49-4	B8514	31	NR2	9.830		x	12/18/2002	256	B160J5	ML		25	31		
DD-44-3	B8509	12	HR3D	10.010	x	x	12/18/2002	202	B160J0	SV		46			
DD-44-4	B8510	18	HR3D	10.010	x	x	12/18/2002	533	B160J1	ML		247	100		
DD-44-4	B8510	18	HR3D	10.010	x	x	12/18/2002	533	B15YY9	STR				H3	
DD-43-2	B8507	10	HR3D	10.050	x	x	12/18/2002		No yield						No yield
DD-43-3	B8508	13.9	HR3D	10.050	x	x	12/18/2002	281	B160M8	ML		144	44		
DD-42-2	B8504	10.2	HR3D	10.090	x	x	12/18/2002		No yield						No yield
DD-42-3	B8505	15.2	HR3D	10.090	x	x	12/18/2002		No yield						No yield
DD-42-4	B8506	18.2	HR3D	10.090	x	x	12/18/2002	354	B160H7	ML		295	58		
DD-41-2	B8483	13.6	HR3D	10.124		x	12/18/2002	295	B160H2	ML		176	59		
DD-41-3	B8484	18.6	HR3D	10.124	x	x	12/18/2002	260	B160H3	SV		143			
DD-41-1	B8503	8.1	HR3D	10.124		x	12/18/2002	124	B160H4	SV		1			Probably shallow tube at 8.1 ft (i.e., DD-41-1, not -4)
Redox-4-3.0	C3383	3.00	HR3D	10.125		x	12/18/2002		No yield						Riverbed pore water tubes; no yield
Redox-4-6.0	C3515	6.00	HR3D	10.125		x	12/18/2002		No yield						Riverbed pore water tubes; no yield
Redox-3-3.3	C3384	3.30	HR3D	10.180	x	x	12/18/2002	611	B160K8	SV		172			Riverbed pore water tubes
Redox-3-4.6	C3514	4.60	HR3D	10.180	x	x	12/18/2002	585	B160K7	ML		166	160		Riverbed pore water tubes
DD-39-1	B8479	5.5	HR3D	10.210	x	x	12/18/2002	182	B15YW9	SV		13			Black PVC
DD-39-1	B8479	5.5	HR3D	10.210	x	x	12/18/2002	182	B160F8	SV		12			Black PVC
DD-39-2	B8480	10.5	HR3D	10.210	x	x	12/18/2002	572	B160F9	ML		104	145		Black PVC
DD-39-3	B8481	15	HR3D	10.210	x	x	12/18/2002		No yield						Black PVC; no yield
DD-39-4	B8482	21	HR3D	10.210	x	x	12/18/2002		No yield						Black PVC; no yield
TDP-39							12/18/2002		Not sampled						Diver-installed riverbed pore water tubes
Redox-2-3.0	C3385	3.00	HR3D	10.240	x	x	12/18/2002	227	B160K4	SV		41			Riverbed pore water tubes
Redox-2-6.0	C3513	6.00	HR3D	10.240	x	x	12/18/2002	297	B160K5	ML		30	55		Riverbed pore water tubes
Redox-1-3.3	C3382	3.30	HR3D	10.295		x	12/18/2002		No yield						Riverbed pore water tubes; no yield
Redox-1-6.0	C3512	6.00	HR3D	10.295		x	12/18/2002		No yield						Riverbed pore water tubes; no yield
35-S	B8255	8.0	HR3D	10.390											
35-M	B8254	14.0	HR3D	10.390											
35-D	B8253	21.0	HR3D	10.390											
36-S	B8258	8.0	HR3D	10.580											
36-M	B8257	14.0	HR3D	10.580											
36-D	B8256	21.0	HR3D	10.580											
37-S	B8261	6.5	HR3D	10.700											
37-M	B8260	13.5	HR3D	10.700											
37-D	B8259	19.5	HR3D	10.700											
38-M	B8263	10.0	HR3D	10.840											
38-D	B8262	16.5	HR3D	10.840											
DD-17-2	B8477	10.5	HR3D	11.030	x	x	1/9/2003	166	B160F6	ML		34			INLAND ( ); No flow from OFFSHORE ( ); tube identify uncertain
DD-17-3	B8478	15	HR3D	11.030	x	x	1/9/2003		No yield						?OFFSHORE? ( ); tube identify uncertain; no yield
DD-16-3	B8475	17.5	HR3D	11.060		x	1/9/2003		Not sampled						Could not locate
DD-16-4	B8476	25.5	HR3D	11.060		x	1/9/2003		Not sampled						Could not locate
DD-15-2	B8472	15	HR3D	11.100		x	1/9/2003		Not sampled						?A?, murky, sc = 127; no sample
DD-15-3	B8473	21	HR3D	11.100		x	1/9/2003	182	B160F3	ML		21			
DD-15-4	B8474	25.5	HR3D	11.100		x	1/9/2003		No yield						?B?, no yield
TDP-15 C	none		HR3D	11.100		x	1/9/2003	201	B160F2	ML		29			One of three diver-installed riverbed pore water tubes
DD-12-2	B8469	10	HR3D	11.200	x	x	1/9/2003		Not sampled						Low spec conduct (either 12-2 or 12-3)
DD-12-3	B8470	15	HR3D	11.200	x	x	1/9/2003		Not sampled						Missing tube, stake only (either 12-2 or 12-3)

Aquifer Sampling Tubes: November 2002 to January 2003

AQST_NAME _CURRENT	WELL_ID	PORT_ DEPTH (feet-bgs)	SEGMENT	HYDRO	On 10/8/02 list	On 10/24/02 list	Fall 2002 Sample Date	Fall 2002 Spec Conduct (uS/cm)	Fall 2002 Sample No.	Lab	Qual	Fall 2002 Hex Chromium (ug/L)	Fall 2002 Sulfate (mg/L)	Severn Trent Analyses	Fall 2002 Comment
DD-12-4	B8471	21	HR3D	11.200	x	x	1/9/2003	149	B160D9	ML		14			INLAND ( ); OFFSHORE ( ) sc = 127
DD-10-2	B8819		HR3D	11.270		x	1/9/2003		Not sampled						?SHORT?
DD-10-3	B8820		HR3D	11.270		x	1/9/2003		Not sampled						?MEDIUM?
DD-10-4	B8468	22	HR3D	11.270		x	1/9/2003	182	B160D7	ML		6			TALL of three tubes; SHORT sc = 126; MEDIUM sc = 139
DD-08-2	B8821		HR3D	11.340		x	1/9/2003		Not sampled						Could not locate
DD-08-3	B8466	17.2	HR3D	11.340		x	1/9/2003		Not sampled						Could not locate
DD-08-4	B8467	22	HR3D	11.340		x	1/9/2003		Not sampled						Could not locate
DD-06-2	B8464	12	HR3D	11.400		x	1/9/2003		No yield						"C" sc = 117 rising; "A" no yield
DD-06-3	B8465	16	HR3D	11.400		x	1/9/2003	197	B160D1	ML		9			"B" of three tubes
39-S	B8267	8.0	HR3D	11.620											
39-M	B8266	18.0	HR3D	11.620											
39-D	B8265	28.0	HR3D	11.620											
40-S	B8270	8.0	HR3D	11.980											
40-M	B8269	15.5	HR3D	11.980											
41-S	B8273	10.0	HR3D	13.100											
41-M	B8272	15.0	HR3D	13.100											
41-D	B8271	25.0	HR3D	13.100											
42-S	B8276	10.0	HR3D	13.550	x	x			Not sampled						Not accessed--eagles in the area
42-M	B8275	15.0	HR3D	13.550	x	x			Not sampled						Not accessed--eagles in the area
42-D	B8274	24.0	HR3D	13.550		x			Not sampled						Not accessed--eagles in the area
43-M	B8278	7.5	HR3H	14.040											
43-D	B8277	9.7	HR3H	14.040											
44-M	B8281	8.5	HR3H	14.260	x	x			Not sampled						Not accessed--eagles in the area
44-D	B8280	12.7	HR3H	14.260		x			Not sampled						Not accessed--eagles in the area
DH-1451-1	B8521		HR3H	14.390											
DH-1452-1	B8522		HR3H	14.450											
45-S	B8285	8.0	HR3H	14.660											
45-M	B8284	15.0	HR3H	14.660											
45-D	B8283	23.0	HR3H	14.660											
DH-14-1	B8519	32	HR3H	14.860											
DH-14-11	B8520		HR3H	14.860											
46-D	B8286	10.5	HR3H	15.120	x	x	1/14/2003	183	B16056	ML		8			
46-D	B8286	10.5	HR3H	15.120	x	x	1/14/2003	183	B15YT6	STR				Tc-99	
47-M	B8290	8.0	HR3H	15.300			1/14/2003		Not sampled						DOWNSTREAM sc = 128
47-D	B8289	14.5	HR3H	15.300			1/14/2003	143	B15YW5	ML		8			UPSTREAM; River sc = 140
DH-22-1	B8523	4	HR3H	15.500											
DH-22-2	B8524	8	HR3H	15.500											
DH-22-3	B8525	13.5	HR3H	15.500											
48-S	B8294	9.0	HR3H	15.520		x	1/14/2003	466	B16059	SV		15			
48-M	B8293	17.0	HR3H	15.520	x	x	1/14/2003	476	B16058	ML		21			
48-M	B8293	17.0	HR3H	15.520	x	x	1/14/2003	476	B160L6	SV		18			QC lab split
48-M	B8293	17.0	HR3H	15.520		x	1/14/2003	476	B15YX5	STR				Sr-90	
48-D	B8292	25.0	HR3H	15.520		x	1/14/2003		No yield						No yield
49-S	B8297	8.5	HR3H	15.680		x	1/14/2003	163	B16060	SV		10			
49-M	B8296	17.5	HR3H	15.680	x	x	1/14/2003	350	B16061	SV		12			
49-D	B8295	25.5	HR3H	15.680		x	1/14/2003	381	B16062	ML		20			
50-S	B8300	8.5	HR3H	15.710		x	1/14/2003	409	B16065	SV		17			
50-S	B8300	8.5	HR3H	15.710		x	1/14/2003	409	B16065	SV		16			QC analysis duplicate
50-M	B8299	17.5	HR3H	15.710	x	x	1/14/2003	522	B16064	ML		37			
50-D	B8298	26.5	HR3H	15.710		x	1/14/2003		No yield						No yield
51-S	B8303	9.5	HR3H	15.890		x	1/14/2003	367	B16068	SV		23			
51-M	B8302	17.5	HR3H	15.890	x	x	1/14/2003	443	B16067	SV		32			
51-D	B8301	25.5	HR3H	15.890		x	1/14/2003	455	B16066	ML		43			
52-S	B8306	7.0	HR3H	16.100		x	1/14/2003	203	B16071	SV		9			
52-M	B8305	15.0	HR3H	16.100		x	1/14/2003	256	B16070	SV		2			
52-D	B8304	24.0	HR3H	16.100		x	1/14/2003	310	B16069	ML		5			

Aquifer Sampling Tubes: November 2002 to January 2003

AQST_NAME _CURRENT	WELL_ID	PORT_ DEPTH (feet-bgs)	SEGMENT	HRMSL	On 10/30/02 list	On 10/24/02 list	Fall 2002 Sample Date	Fall 2002 Spec Conduct (uS/cm)	Fall 2002 Sample No.	Lab	Qual	Fall 2002 Hex Chromium (ug/L)	Fall 2002 Sulfate (mg/L)	Severn Trent Analyses	Fall 2002 Comment
53-S	B8309	8.0	HR3H	16.370		x	1/14/2003		Not sampled						Assigned lowest priority
53-M	B8308	17.0	HR3H	16.370		x	1/14/2003		Not sampled						Assigned lowest priority
53-D	B8307	26.0	HR3H	16.370		x	1/14/2003		Not sampled						Assigned lowest priority
54-S	B8312	7.5	HR3H	16.400		x	1/15/2003	178	B16077	SV		1			
54-M	B8311	17.0	HR3H	16.400		x	1/15/2003	286	B16076	SV		7			
54-D	B8310	26.0	HR3H	16.400		x	1/15/2003	232	B16075	SV		1			
55-S	B8315	10.0	HR3H	16.670											
55-M	B8314	18.0	HR3H	16.670											
55-D	B8313	26.0	HR3H	16.670											
57-S	B8321	7.0	HR3H	17.100											
57-M	B8320	18.0	HR3H	17.100											
57-D	B8319	29.0	HR3H	17.100											
58-S	B8324	11.0	HR3H	17.160											
58-M	B8323	19.5	HR3H	17.160											
58-D	B8322	26.5	HR3H	17.160											
59-S	B8327	11.0	HR3H	17.380											
59-M	B8326	16.5	HR3H	17.380											
59-D	B8325	23.0	HR3H	17.380											
60-S	B8330	8.5	HR3H	17.740											
60-M	B8329	17.5	HR3H	17.740											
60-D	B8328	26.5	HR3H	17.740											
61-S	B8333	8.5	FR3	18.100											
61-M	B8332	15.5	FR3	18.100											
61-D	B8331	24.0	FR3	18.100											
62-S	B8336	8.0	FR3	18.400		x	1/16/2003	145	B16082	SV		1			
62-M	B8335	18.0	FR3	18.400		x	1/16/2003	444	B16080	SV		4			
62-M	B8335	18.0	FR3	18.400		x	1/16/2003	444	B16079	STR				Sr-90	
62-D	B8334	26.0	FR3	18.400		x	1/16/2003		No yield						No yield
63-S	B8339	10.0	FR3	18.810		x	1/16/2003	142	B16088	SV		3			DOWNRIVER
63-M	B8338	16.0	FR3	18.810		x	1/16/2003	193	B16086	SV		14			MIDDLE; no Sr-90 due very low yield; river sc = 129
63-D	B8337	23.0	FR3	18.810		x	1/16/2003		No yield						No yield
64-S	B8342	7.5	FR3	18.940		x	1/16/2003		No yield						UPRIVER; no yield
64-M	B8341	17.0	FR3	18.940		x	1/16/2003	133	B16092	SV		1			DOWNRIVER
64-D	B8340	27.0	FR3	18.940		x	1/16/2003	219	B16090	SV		3			MIDDLE
64-D	B8340	27.0	FR3	18.940		x	1/16/2003	219	B16091	STR				Sr-90	MIDDLE; river sc = 132
65-S	B8345	8.5	FR3	19.100		x	1/16/2003	153	B16080	SV		7			River sc = 130.2
65-S	B8345	8.5	FR3	19.100		x	1/16/2003	153	B16090	SV		8			QC analysis duplicate
65-M	B8344	16.0	FR3	19.100		x	1/16/2003	146	Not sampled						Spec conduct too low for Sr-90
65-D	B8343	27.0	FR3	19.100		x	1/16/2003		No yield						No yield
66-S	B8348	10.0	FR3	19.370		x	1/16/2003	176	B16086	SV		0			
66-M	B8347	19.2	FR3	19.370		x	1/16/2003	209	B16084	SV		3			
66-D	B8346	28.1	FR3	19.370		x	1/16/2003	204	B16082	SV		4			
66-D	B8346	28.1	FR3	19.370		x	1/16/2003	204	B16083	STR				Sr-90	
67-S	B8351	10.0	FR3	19.580		x	1/16/2003	179	B160C2	SV		1			
67-M	B8350	20.0	FR3	19.580		x	1/16/2003	181	B160C0	SV		2			
67-M	B8350	20.0	FR3	19.580		x	1/16/2003	181	B16089	STR				Sr-90	
67-D	B8349	30.0	FR3	19.580		x	1/16/2003		No yield						No yield
68-S	B8354	10.5	FR3	19.760		x	1/16/2003		Not sampled						Not accessed--eagles in the area
68-M	B8353	18.3	FR3	19.760		x	1/16/2003		Not sampled						Not accessed--eagles in the area
68-D	B8352	25.0	FR3	19.760		x	1/16/2003		Not sampled						Not accessed--eagles in the area

Figure 3-9. 100-KR-4 Chromium Plume, Fall 2002.

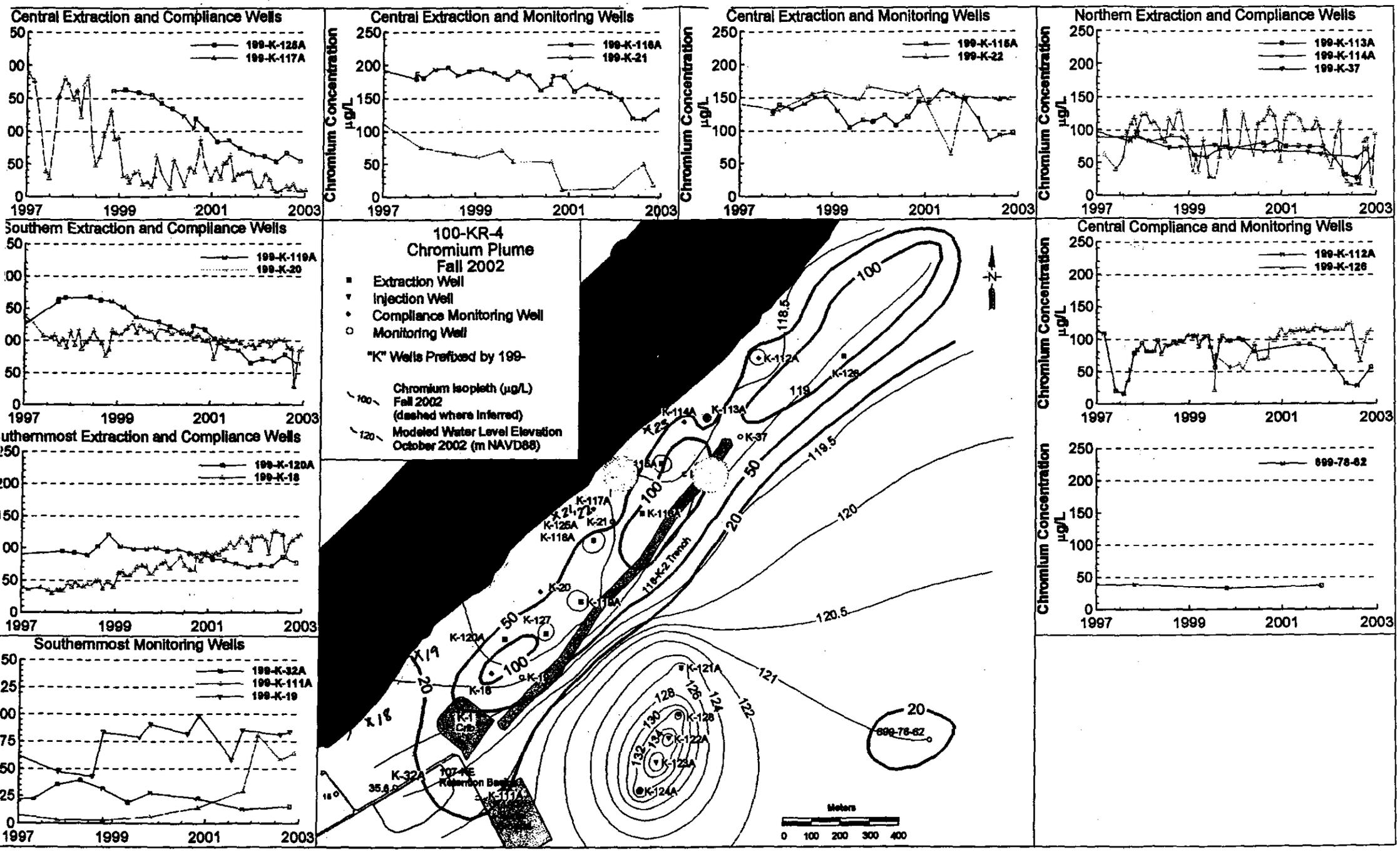


Figure 2-13. 100-H Area 2002 Chromium Plume.

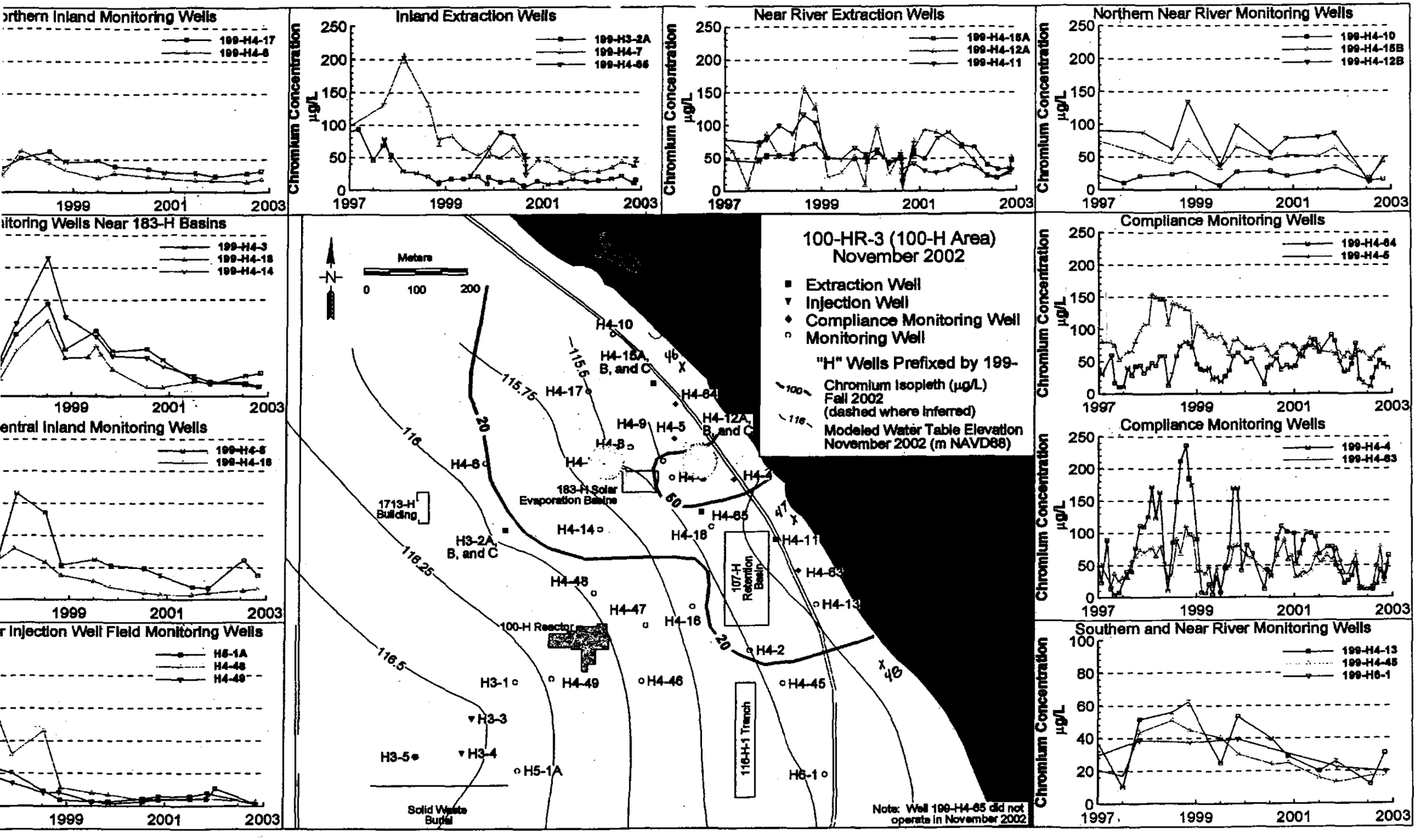
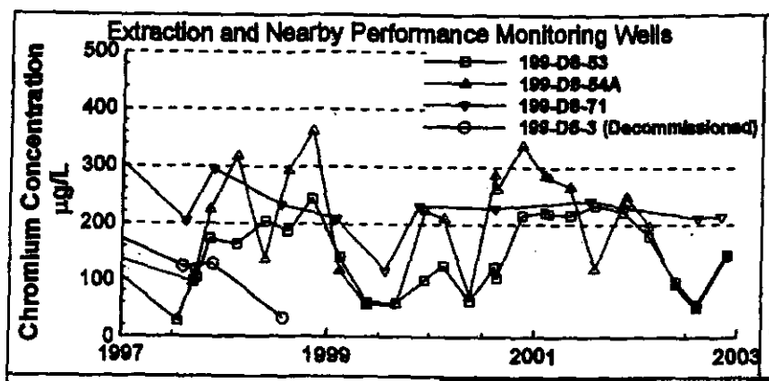
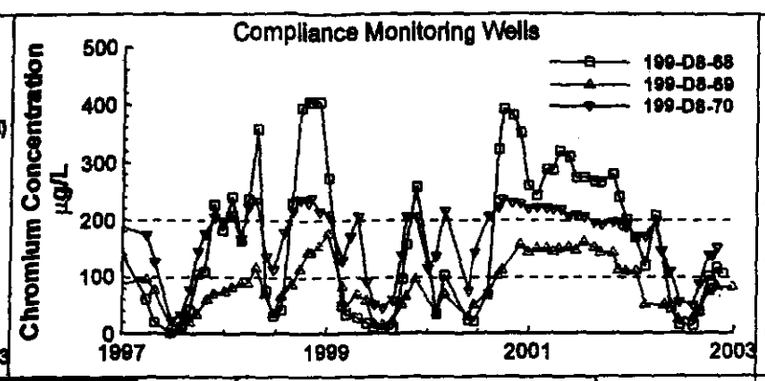
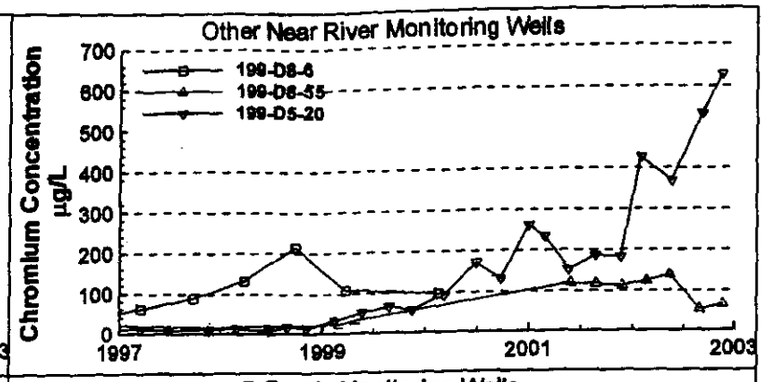
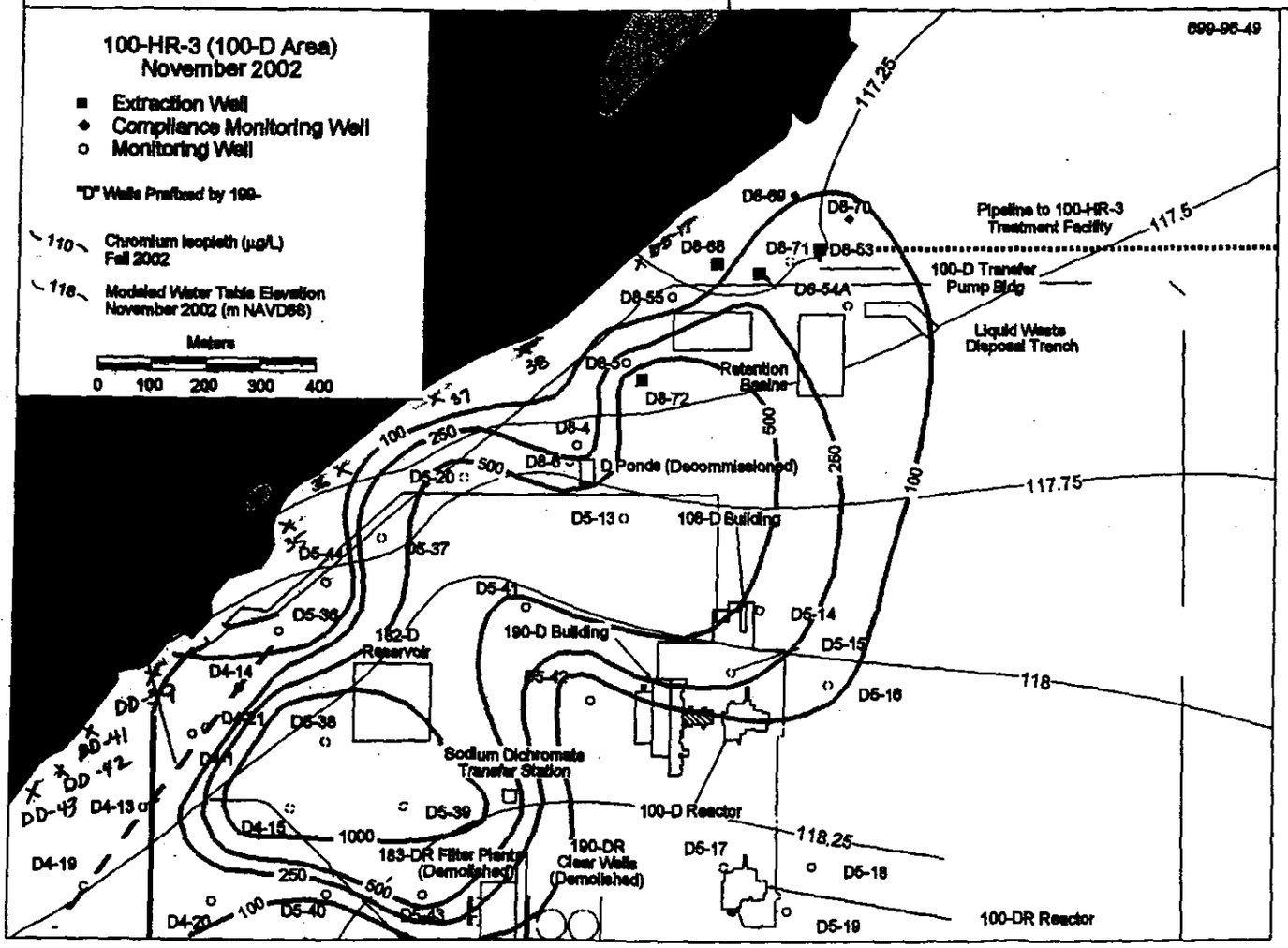


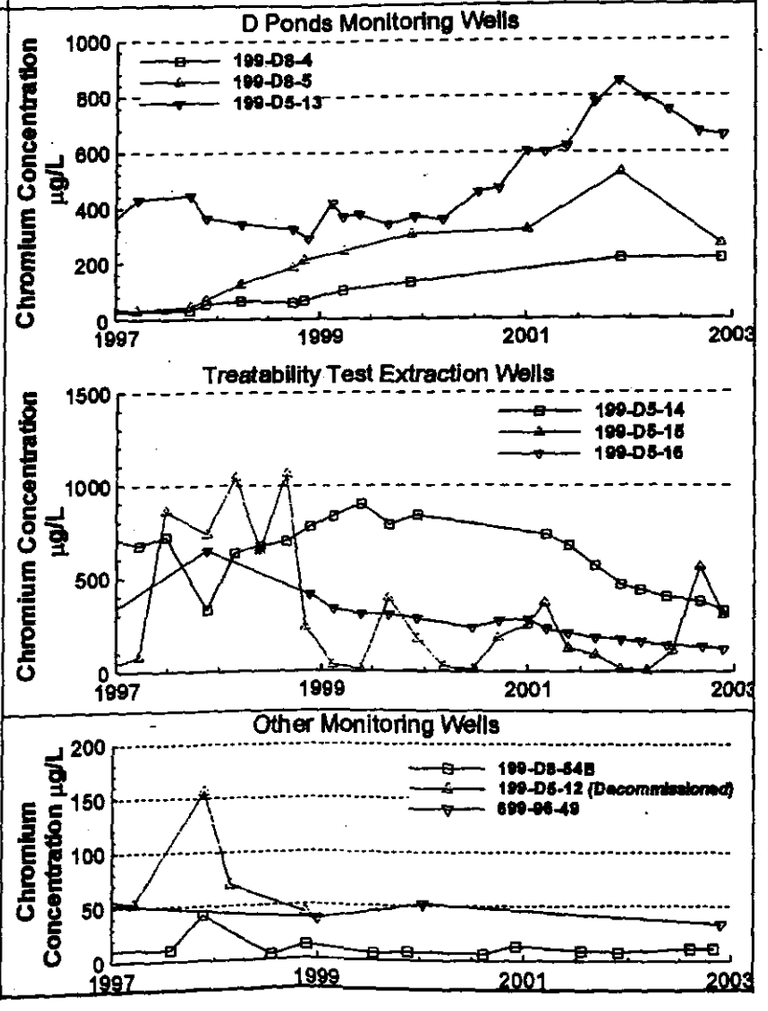
Figure 2-10. 100-D Area 2002 Chromium Plume Map.











Attachment 6

Petroleum hydrocarbons in 100 N Area: Status 22 May, 2003

M.J. Hartman, PNNL

In March 2003 the thickness of the floating product in well 199-N-18 (Figure 1 shows well locations) was measured at 0.09 ft (~2 cm). The samplers then collected (a) primarily the floating product; and (b) groundwater beneath the floating product, representing dissolved contamination. Previous groundwater samples from this well (e.g. September 2001) may have included some nonaqueous product in addition to dissolved contamination, causing the result to be higher than was representative of dissolved product.

Results of the March 2003 analyses for well 199-N-18 (Table 1) indicate that (a) the floating product is diesel (630,000 mg/L) and (b) the groundwater still contains elevated levels of dissolved contamination (1,600 mg/L; Figure 2).

Nearby monitoring wells 199-N-3 and 199-N-19 contained no detectable contamination in March 2003 (Figure 3; note difference in scale). Well 199-N-3 is also monitored for the 1301-N RCRA site, and has had elevated total organic carbon levels, but these have declined since late 2000 (Figure 4). No oil sheen or odor were noted during sampling in March 2003.

Well 199-N-96A, on the bank of the Columbia River, was sampled in April 2003 but results have not been received from the lab to date.

The groundwater project will continue to monitor petroleum hydrocarbons and will sample wells 199-N-3, 199-N-18, 199-N-19, and 199-N-96A semiannually for TPH-gas, TPH-diesel, and oil and grease.

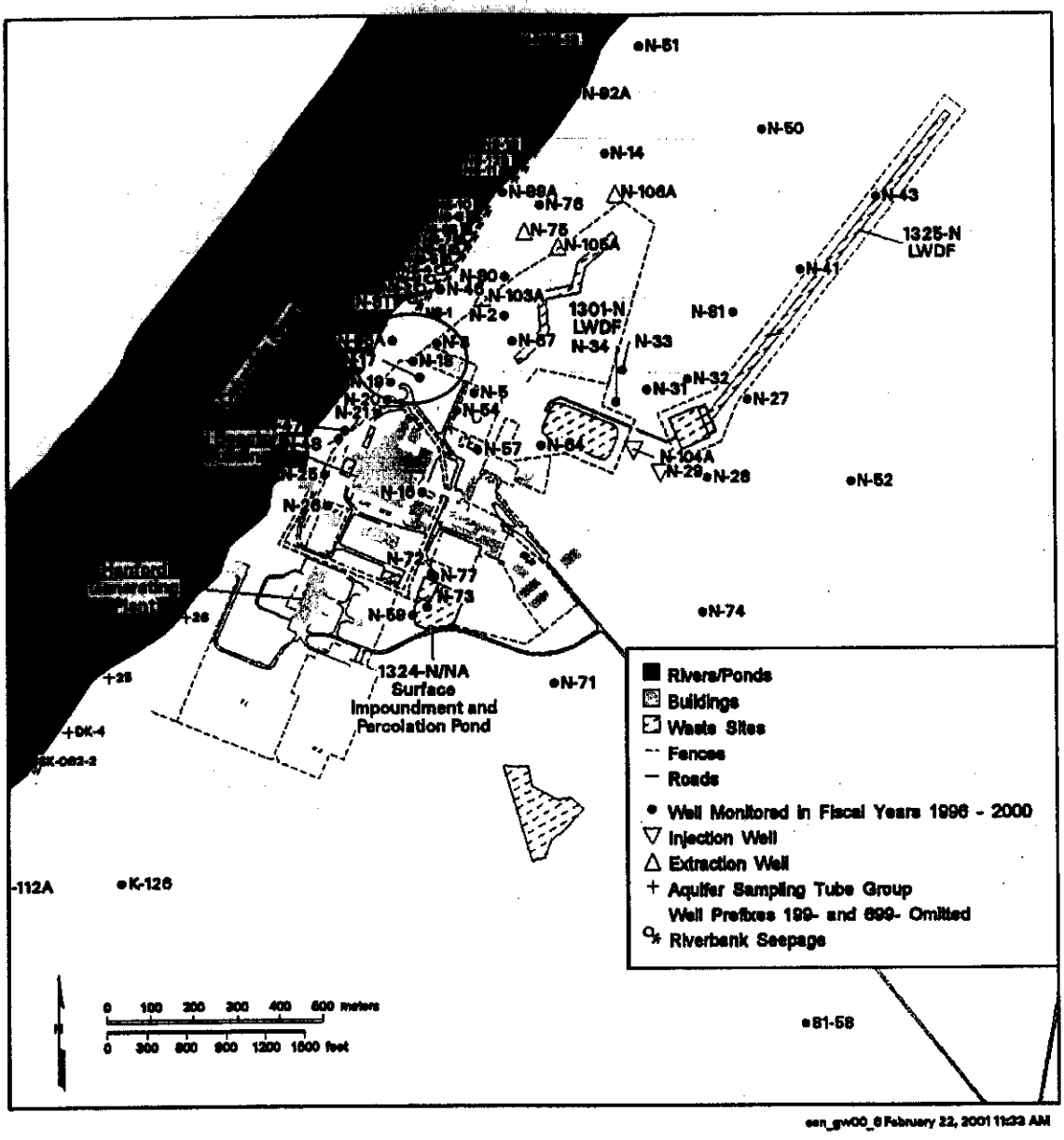


Figure 1. Monitoring Wells in the 100 N Area. Oval shows area of petroleum hydrocarbon contamination

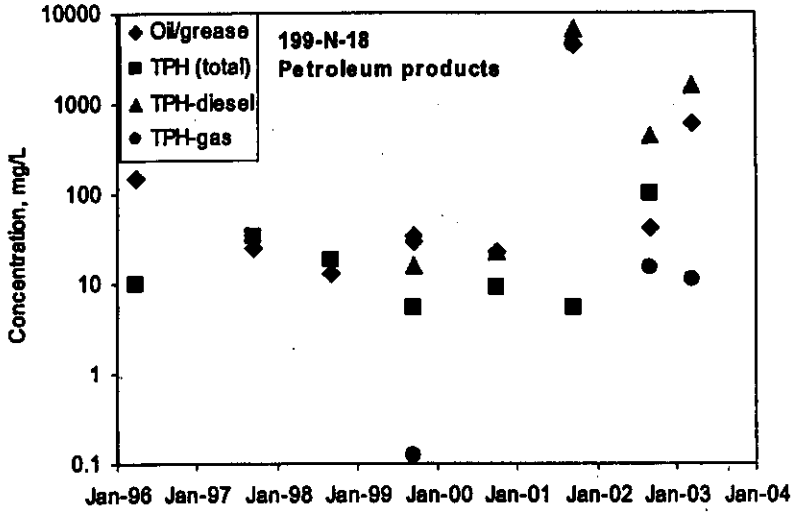


Figure 2. Petroleum hydrocarbons in well 199-N-18, near former leak site.

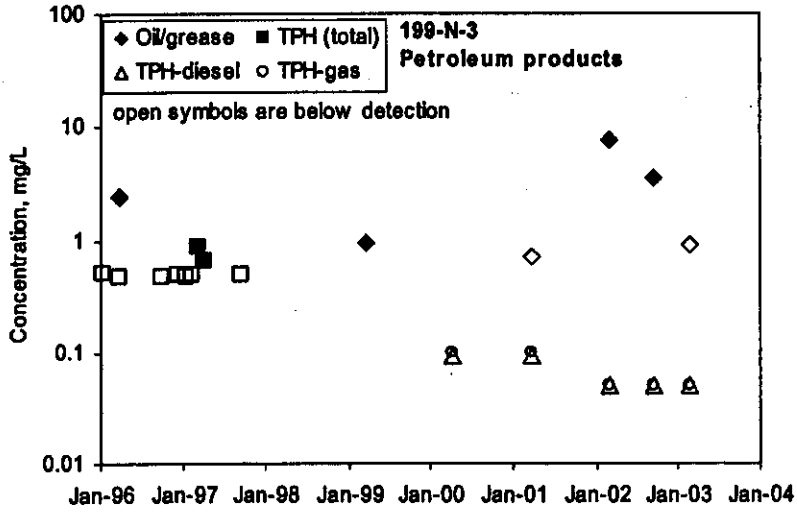


Figure 3. Petroleum hydrocarbons in well 199-N-3, cross-gradient from former leak site.

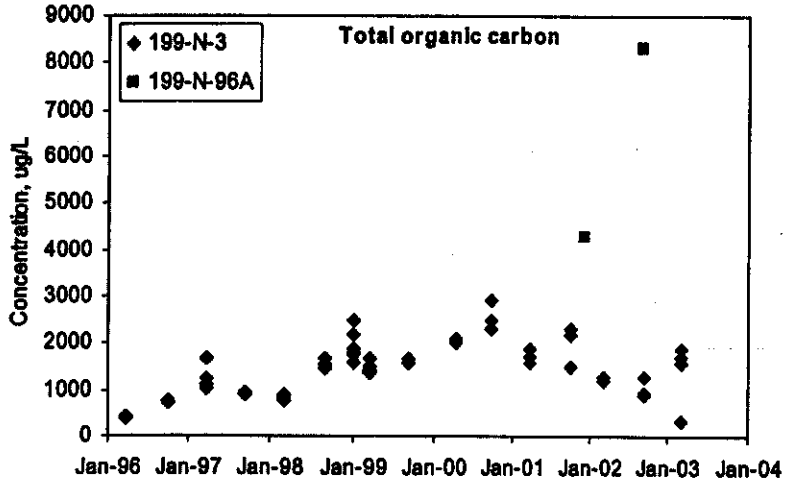


Figure 4. Total organic carbon in wells 199-N-3 and 199-N-96A (no March 2003 TOC data for 199-N-96A).

Table 1. Petroleum hydrocarbons and Detected Volatile Organic Compounds in wells 199-N-18, 199-N-19, 199-N-3, and 199-N-96A. Shading indicates most recent results (2 sheets).

Well	Constituent	Date	Result	Units	Lab Qual.	Review Qualifier
199-N-18	Oil and grease	3/20/1996	147	mg/L		
199-N-18	Oil and grease	9/11/1997	25.1	mg/L		
199-N-18	Oil and grease	9/2/1998	13.1	mg/L		
199-N-18	Oil and grease	9/14/1999	33.8	mg/L		
199-N-18	Oil and grease	9/14/1999	28.8	mg/L		H
199-N-18	Oil and grease	9/26/2000	23.2	mg/L		
199-N-18	Oil and grease	9/17/2001	4460	mg/L		
199-N-18	Oil and grease	9/5/2002	42.3	mg/L		
199-N-18	Oil and grease	3/20/2003	585	mg/L		
199-N-18	TPH	3/20/1996	10.2	mg/L	J	
199-N-18	TPH	9/11/1997	33.6	mg/L		
199-N-18	TPH	9/2/1998	18.1	mg/L		
199-N-18	TPH	9/14/1999	5.4	mg/L		
199-N-18	TPH	9/26/2000	9	mg/L		
199-N-18	TPH	9/17/2001	5.3	mg/L		Y
199-N-18	TPH	9/5/2002	98.5	mg/L		
199-N-18	Diesel oil	9/14/99	16	mg/L	D	
199-N-18	TPH - diesel range	9/26/2000	23	mg/L	DN	
199-N-18	TPH - diesel range	9/17/2001	6800	mg/L	DN	
199-N-18	TPH - diesel range	9/5/2002	440	mg/L	DN	
199-N-18	TPH - diesel range	3/20/2003	1600	mg/L	D	
199-N-18 floating layer	TPH - diesel	3/20/2003	630,000	mg/L		
199-N-18	Gasoline	9/14/1999	0.12	mg/L		
199-N-18	TPH - gasoline range	9/17/2001	4300	mg/L	DN	
199-N-18	TPH - gasoline range	9/5/2002	15	mg/L	D	
199-N-18	TPH - gasoline range	3/20/2003	11	mg/L	D	
199-N-19	TPH	3/21/1996	0.47	mg/L	U	
199-N-19	Oil and grease	3/21/1996	3.7	mg/L		
199-N-19	TPH - gasoline range	3/11/2002	0.05	mg/L	U	
199-N-19	TPH - gasoline range	3/3/2003	0.05	mg/L	U	
199-N-19	TPH - diesel range	3/11/2002	0.05	mg/L	U	
199-N-19	TPH - diesel range	3/20/2003	0.05	mg/L	U	
199-N-19	Oil and grease	3/11/2002	9.9	mg/L		
199-N-19	Oil and grease	3/3/2003	0.92	mg/L	U	
199-N-3	Oil and grease	3/25/1996	2.38	mg/L		
199-N-3	Oil and grease	3/17/1999	0.93	mg/L	B	
199-N-3	Oil and grease	3/22/2001	0.7	mg/L	U	
199-N-3	Oil and grease	3/22/2001	0.7	mg/L	U	
199-N-3	Oil and grease	3/5/2002	7.5	mg/L		
199-N-3	Oil and grease	9/16/2002	3.5	mg/L		
199-N-3	Oil and grease	9/16/2002	3.5	mg/L		

Table 1. Petroleum hydrocarbons and Detected Volatile Organic Compounds in wells 199-N-18, 199-N-19, 199-N-3, and 199-N-96A. Shading indicates most recent results (2 sheets).

Well	Constituent	Date	Result	Units	Lab Qual.	Review Qualifier
199-N-3	Oil and grease	3/4/2003	0.92	mg/L	U	
199-N-3	TPH	1/8/1996	0.5	mg/L	U	
199-N-3	TPH	3/25/1996	0.47	mg/L	U	
199-N-3	TPH	9/30/1996	0.47	mg/L	U	
199-N-3	TPH	12/5/1996	0.48	mg/L	U	
199-N-3	TPH	1/9/1997	0.47	mg/L	U	
199-N-3	TPH	2/5/1997	0.48	mg/L	U	
199-N-3	TPH	3/6/1997	0.85	mg/L		
199-N-3	TPH	4/2/1997	0.64	mg/L		
199-N-3	TPH	9/10/1997	0.495	mg/L	U	
199-N-3	TPH - diesel range	4/13/2000	0.092	mg/L	U	
199-N-3	TPH - diesel range	3/22/2001	0.092	mg/L	U	
199-N-3	TPH - diesel range	3/22/2001	0.092	mg/L	U	
199-N-3	TPH - diesel range	3/5/2002	0.05	mg/L	U	
199-N-3	TPH - diesel range	9/16/2002	0.05	mg/L	U	
199-N-3	TPH - diesel range	9/16/2002	0.05	mg/L	U	
199-N-3	TPH - diesel range	3/4/2003	0.05	mg/L	U	
199-N-3	TPH - gasoline range	4/13/2000	0.1	mg/L	U	
199-N-3	TPH - gasoline range	3/22/2001	0.1	mg/L	U	
199-N-3	TPH - gasoline range	3/22/2001	0.1	mg/L	U	
199-N-3	TPH - gasoline range	3/5/2002	0.05	mg/L	U	
199-N-3	TPH - gasoline range	9/16/2002	0.05	mg/L	U	
199-N-3	TPH - gasoline range	9/16/2002	0.05	mg/L	U	
199-N-3	TPH - gasoline range	3/4/2003	0.05	mg/L	U	
199-N-96A	Acetone	9/9/2002	3.1	ug/L	JB	
199-N-96A	Methylene chloride	9/9/2002	0.86	ug/L	JB	
199-N-96A	Oil and grease	12/3/2001	0.7	mg/L	U	H
199-N-96A	Oil and grease	9/9/2002	1.3	mg/L		
199-N-96A	Oil and grease	4/16/2003	pending	mg/L		
199-N-96A	TPH	1/13/1997	0.5	mg/L	U	
199-N-96A	TPH	3/10/1997	0.47	mg/L	U	
199-N-96A	TPH	9/24/1997	0.5	mg/L	U	
199-N-96A	TPH - diesel range	12/3/2001	0.05	mg/L	U	
199-N-96A	TPH - diesel range	9/9/2002	1.5	mg/L		
199-N-96A	TPH - diesel range	4/16/2003	pending	mg/L		
199-N-96A	TPH - gasoline range	12/3/2001	0.05	mg/L	U	
199-N-96A	TPH - gasoline range	9/9/2002	0.05	mg/L	U	
199-N-96A	TPH - gasoline range	4/16/2003	pending	mg/L		

Qualifiers:
B = analyte found in associated laboratory blank
D = sample diluted before analysis. Result corrected for dilution.
H = exceeded recommended holding time.
J = estimated value (e.g., close to detection limit).
N = laboratory spike sample associated with result was outside control limits.
U = less than detection limit.
Y = suspected error. TPH result was low while TPH-gas and TPH-diesel were much higher.

Attachment 7

WIDS Site CVP Closeout Summary Table

WIDS Site Closeout	CVP Doc. No. documenting WIDS site closeout	EPA/ Ecology WIDS Signoff	Issue Rev. 0 CVP
100 B/C Area			
116-B-13	CVP-1999-00002	7/22/99	7/1999
116-B-14	CVP-1999-00003	7/22/99	7/1999
116-C-1	CVP-1998-00006	1/21/99	1/1999
116-B-1	CVP-1999-00012	12/08/1999	12/1999
116-B-11	CVP-1999-00001	12/08/1999	12/1999
116-C-5	CVP-1999-00004	12/08/1999	12/1999
116-B-4	CVP-1999-00014	02/24/2000	03/03/2000
116-B-6B	CVP-1999-00017	02/24/2000	03/03/2000
116-B-9	CVP-1999-00009	02/24/2000	03/03/2000
116-B-2	CVP-1999-00015	02/24/2000	03/03/2000
116-B-3	CVP-1999-00013	02/24/2000	03/03/2000
116-B-10	CVP-1999-00010	02/24/2000	03/03/2000
116-B-12	CVP-1999-00008	02/24/2000	03/03/2000
116-C-2A 116-C-2B 116-C-2C	CVP-1999-00019	03/15/2000	03/28/1999
116-B-6A 116-B-16	CVP-1999-00011	05/17/2000	05/26/2000
116-B-7 132-B-6 132-C-2	CVP-2002-00003	7/25/2002	08/06/2002
BC Pipeline	CVP-2002-00012	*(Review Draft 08/12/03; Signoff 9/30/03)*	
1607-B7	CVP-2003-00004	05/27/2003	
1607-B8	CVP-2003-00005	05/27/2003	
1607-B9	CVP-2003-00006	*(Review Draft 06/30/03; Signoff 8/19//03)*	
1607-B10	CVP-2003-00007	05/27/2003	
1607-B11	CVP-2003-00008	05/27/2003	
100-C-3	CVP-2003-00009	05/27/2003	
100 D Area			
100-D-4 (107D5)	CVP-98-00004	03/25/1999	3/1999
100-D-20 (107D3)	CVP-98-00003	03/25/1999	3/1999
100-D-21(107D2)	CVP-98-00002	03/25/1999	3/1999
100-D-22 (107D1)	CVP-98-00001	03/25/1999	3/1999
1607-D2		closed	
1607-D2:1 Tile Field	CVP-98-00005	03/25/1999	3/1999
Septic Pipelines	CVP-2000-0004	09/26/2000	9/2000
Septic Tank	CVP-99-00005	11/23/1999	12/1999
116-DR-9 100-D-25	CVP-99-00006	01/06/2000	1/2000
116-D-7	CVP-99-00007	08/15/2000	8/2000
100-D-18 (107D4)	CVP-2000-00001	09/26/2000	10/02/2000
116-DR-1 116-DR-2	CVP-2000-00002	09/26/2000	09/27/2000
100-D-48		closed	
100-D-48:1 (Grp 2 North Pipelines)	CVP-2000-00003	03/14/2001	3/2001
100-D-48:2 (Grp 2 West Pipelines)	CVP-2000-00005	09/26/2000	10/02/2000
100-D-48:3 (Grp 3 Large Pipelines)	CVP-2000-00034	04/20/2001	04/20/2001
100-D-48:4 (Grp 3 Small Pipelines)	CVP-2000-00033	04/17/2001	04/20/2001
100-D-19 UPR-100-D-4	CVP-2000-00003	03/14/2001	3/2001
100-D-49		closed	
100-D-49:1 (Grp 2 North Pipelines)	CVP-2000-00003	03/14/2001	3/2001
100-D-49:2 (Grp 2 East Pipelines)	CVP-2000-00005	09/26/2000	10/02/2000
100-D-48:3 (Grp 3 Large Pipelines)	CVP-2000-00034	04/20/2001	04/20/2001

WIDS Site CVP Closeout Summary Table

WIDS Site Closeout	CVP Doc. No. documenting WIDS site closeout	EPA/ Ecology WIDS Signoff	Issue Rev. 0 CVP
100 D Area (cont.)			
UPR-100-D-2 UPR-100-D-3	CVP-2000-00005	09/26/2000	10/02/2000
100-D-5 100-D-6	CVP-2000-00034	04/20/2001	04/20/2001
116-D-3	no CVP site rejected	05/17/2000	N/A
116-D-4	CVP-2000-00008	10/23/2000	10/31/2000
116-D-6	CVP-2000-00009	11/07/2000	11/09/2000
116-D-1A 116-D-1B 100-D-46	CVP-2000-00010	03/12/2001	3/2001
116-D-2	CVP-2000-00013	10/23/2000	10/25/2000
116-DR-6	CVP-2000-00014	10/23/2000	10/24/2000
116-DR-4	CVP-2000-00015	10/23/2000	10/25/2000
100-D-12	CVP-2000-00016	10/23/2000	10/26/2000
100-D-52	CVP-2000-00018	11/07/2000	11/09/2000
116-DR-7	CVP-2000-00019	09/26/2000	10/02/2000
116-D-9	CVP-2000-00012	03/23/2001	03/23/2001
100 H Area			
1607-H2	CVP-2000-00024	02/05/2001	2/2001
1607-H4	CVP-2000-00025	02/26/2001	02/26/2001
116-H-1	CVP-2000-00026	04/04/2001	04/11/2001
116-H-7	CVP-2000-00027	07/24/2001	08/01/2001
100-H-5	CVP-2000-00028	12/21/2000	12/21/2000
100-H-17 116-H-2 100-H-2 100-H-30	CVP-2000-00031	03/06/2001	03/08/2001
100-H-21 100-H-22 100-H-1	CVP-2000-00029	03/29/2001	03/29/2001
100-H-24	CVP-2000-00030	05/09/2001	5/2001
116-H-3	CVP-2000-00032	04/03/2001	04/11/2001
100 N Area			
120-N-1 120-N-2 100-N-58	CVP-2001-00021	03/28/2002	04/18/2002
116-N-3	CVP-2002-00002	09/26/2002	12/23/2002
100 Area Misc. & 300 Area			
JA Jones	CVP-2001-00019	11/08/2001	12/10/2001
600-23	CVP-2001-00020	11/30/2001	12/17/2001
300-49 (Landfill 1A)	CVP-2001-00015	1/24/03 (*Signoff 4/17/03)*	
300-50 (Landfill 1B)	CVP-2001-00016	1/27/03 (*Signoff 4/17/03)*	
628-4 (Landfill 1D)	CVP-2001-00017	*(Review Draft 04/10/03; Signoff 5/14/03)*	
316-1(South Process Pond)	CVP-2001-00018	*(Review Draft 04/10/03; Signoff 5/14/03)*	
628-4 (Burial Ground)	CVP-2002-00014	*(Review Draft 07/03/03; Signoff 08/21/03)*	

WIDS Site CVP Closeout Summary Table

WIDS Site Closeout	CVP Doc. No. documenting WIDS site closeout	EPA/ Ecology WIDS Signoff	Issue Rev. 0 CVP
100 F Area			
116-F-4	CVP-2001-00006	11/08/2001	11/15/2001
116-F-5	CVP-2001-00007	08/16/2001	08/23/2001
1607-F6	CVP-2001-00010	11/08/2001	11/15/2001
UPR-100-F2	CVP-2001-00011	04/22/2002	05/07/2002
100-F-19:1	CVP-2001-00002	05/21/2002	06/10/2002
100-F-19:3			
100-F-34			
116-F-12			
100-F-40	site closed (No CVP)	02/15/2002	02/15/2002
116-F-14	CVP-2001-00009	07/11/2002	07/18/2002
100-F-2	CVP-2001-00001	07/25/2002	08/05/2002
100-F-15	CVP-2002-00001	07/25/2002	08/06/2002
100-F-4			
100-F-11			
100-F-16			
116-F-9	CVP- 2001-00008	10/16/2002	10/22/2002
116-F-2	CVP- 2001-00005	01/13/2003	03/11/2003
126-F-1	CVP- 2002-00002	01/13/2003	TBD
100-F-35	CVP-2002-00007	04/15/2003	
116-F-1	CVP-2002-00009	*(5/21/03)*	
116-F-3	CVP-2002-00008	04/15/2003	
116-F-6	CVP-2002-00010	*(5/21/03)*	
116-F-10	CVP-2002-00006	04/15/2003	
1607-F2	CVP-2002-00005	01/13/2003	03/11/2003
100-F-19:2	CVP-2001-00003	05/27/2003	
116-F-11			
UPR-100-F1			
100-F-29			

Attachment 8

108421

Deferring 105-D Fuel Storage Basin Side Slope Soils To Remedial Action/Waste Disposal Program

May 15, 2003

I. Background

Decontamination and decommissioning (D&D) of the 105-D Fuel Storage Basin (FSB) by Decommissioning Projects is nearing completion. Demolition material has been removed and in-process characterization of the excavation has been completed. The remaining below-grade concrete structure in the deep zone was sampled and backfilled with clean fill to cover the concrete surfaces during the side slope soil remediation activities. Subsequent in-process characterization data indicates that after several layers of soil were removed, unacceptably high residual radiological contamination remained in the side-slope and overburden soils. Additional soil remediation will be needed that is beyond the scope of the Decommissioning Projects.

II. Discussion

The *Sampling and Analysis Plan for Interim Closure of the 105-D and 105-H Reactor Below-Grade Structures and Underlying Soils* (DOE/RL 2001a) contains specific requirements for conducting interim closure sampling of 105-D FSB side-slope soils. *Side-slope soils* are those soils remaining in the sloped areas on each side of the final excavation. This sampling and analysis plan requires that interim closure soil sampling methodologies be consistent with those contained in the *100 Area Remedial Action Sampling and Analysis Plan* (DOE/RL 2001b).

The *Action Memorandum for the 105-D and 105-H Reactor Facilities and Ancillary Facilities* (Ecology, et al. 2000) states the following:

> *"If it is not feasible to remediate below-grade structures and soil at the time of D&D, the site would be identified as a discovery site in the Hanford Site Waste Site Database. Disposition of these sites would then be deferred to the Remedial Action and Waste Disposal Project, where they would be remediated in accordance with the appropriate 100 Area CERCLA ROD. Ecology's approval is necessary to defer the D&D action to the Remedial Action and Waste Disposal Project."*

The 105-D FSB (118-D-6:3) soil areas will be deferred accordingly to a later remediation project for soil cleanup or reactor block removal since that area is largely within the shadow of the reactor. Soils will be closed out at that time in accordance with the *100 Area Remedial Action Sampling and Analysis Plan* (DOE/RL 2001b), except that the contaminants of concern (COC's) for these areas will be those listed in the *Sampling and Analysis Plan for Interim Closure of the 105-D and 105-H Reactor Below-Grade Structures and Underlying Soils* (DOE/RL 2001a).

III. Conclusion

In accordance with The *Action Memorandum for the 105-D and 105-H Reactor Facilities and Ancillary Facilities* (Ecology, et al. 2000), the remediation and cleanup verification of the 105-D FSB soils (118-D-6:3) will be deferred to the Remedial Action Program. Radiologically contaminated overburden soils will be disposed of at the ERDF. Clean fill will be used to stabilize the excavation in support of the SSE roof installation. The in-process radiological and chemical characterization data, and waste site status information will be documented in a project report for transition to the Remedial Action Program, or the future project that removes the SSE and block.

IV. References

DOE/RL, 2001a, *Sampling and Analysis Plan for interim Closure of the 105-D and 105-H Reactor Below-Grade Structures and Underlying Soils,* DOE/RL-2001-18, Rev. 0, U. S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL, 2001b, *100 Area Remedial Action Sampling and Analysis Plan*, DOE/RL-96-22, Rev. 3, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Ecology, EPA, and DOE, 2000, *Action Memorandum for the 105-D and 105-H Reactor Facilities and Ancillary Facilities, Hanford Site, Benton County, Washington*, CCN 054209, approved December 8, 2000, Washington Sate Department of Ecology, U.S. Environmental Protection Agency Region X, and U.S. Department of Energy, Richland, Washington.

V. Concurrence

Concurrence by the Lead Regulatory Agency (Washington State Department of Ecology) also reflects concurrence by the U.S. Environmental Protection Agency.

5/16/03

D. C. Smith, Project Manager, Environmental Restoration Division — Date
U. S. Dept. of Energy, Richland Operations Office

5/16/03

F. W. Bond, Project Manager, Restoration Projects — Date
Washington State Dept. of Ecology